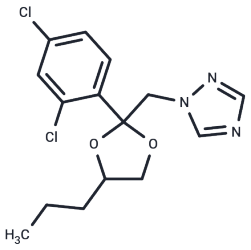
Data Sheet (Cat.No.T20595)

TargetMol

Propiconazole

Chemical Properties



CAS No. : 60207-90-1

Formula: C15H17Cl2N3O2

Molecular Weight: 342.22

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Propiconazole (PRO) is an orally active brassinosteroid biosynthesis inhibitor and a triazole fungicide with antifungal activity.
Targets(IC50)	Reactive Oxygen Species,Antibacterial,Antifungal,ROS
In vivo	Methods: Propiconazole (10, 75, 150 mg/kg, gavage, 14 days) was used to treat male Sprague-Dawley rats and male CD-1 mice to study the effects of propiconazole on hepatic cytochrome P450 gene expression and P450 enzyme activity in vivo; quantitative real-time RT-PCR was performed on rat liver RNA samples from animals treated with 150 mg/kg body weight/day. Results: Compared with the control, the mRNA of the following genes was significantly overexpressed: CYP1A2 (1.62-fold), CYP2B1 (10.8-fold), CYP3A1/CYP3A23 (2.78-fold), and CYP3A2 (1.84-fold); in mouse liver, propiconazole produced mRNA overexpression of Cyp2b10 (2.39-fold) and Cyp3a11 (5.19-fold); propiconazole significantly induced hexanoresorufin O-dealkylation (PROD) and methoxymethasone O-dealkylation (MROD) activities in rat and mouse livers at doses of 150 mg/kg and 75 mg/kg.[4]

Solubility Information

Solubility	DMSO: 80 mg/mL (233.77 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (9.64 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9221 mL	14.6105 mL	29.221 mL
5 mM	0.5844 mL	2.9221 mL	5.8442 mL
10 mM	0.2922 mL	1.461 mL	2.9221 mL
50 mM	0.0584 mL	0.2922 mL	0.5844 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Sun G, et al. Propiconazole-induced cytochrome P450 gene expression and enzymatic activities in rat and mouse liver. Toxicol Lett. 2005 Feb 15;155(2):277-87.
Leng P, Zhang Z, Li Q, Zhang Y, Zhao M, Pan G. Development of a difenoconazole/propiconazole microemulsion and its antifungal activities against Rhizoctonia solani AG1-IA. Pharmazie. 2012 Jun;67(6):534-41.
Skolness SY, et al. Propiconazole inhibits steroidogenesis and reproduction in the fathead minnow (Pimephales promelas). Toxicol Sci. 2013 Apr;132(2):284-97. doi: 10.1093/toxsci/kft010. Epub 2013 Jan 20.
Zhang Z, Jiang W, Jian Q, Song W, Zheng Z, Wang D, Liu X. Residues and dissipation kinetics of triazole fungicides difenoconazole and propiconazole in wheat and soil in Chinese fields. Food Chem. 2015 Feb 1;168:396-403. doi: 10.1016/j.foodchem.2014.07.087. Epub 2014 Jul 24.